

REMARKS

Claim 1 has been amended to include the limitations of Claim 7, and Claim 7 has been cancelled as redundant. Claim 1 has been additionally amended to include the limitation, support for which can be found in the Specification as filed, in paragraph [0074]. No new matter has been introduced by these amendments. The following addresses the substance of the Office Action.

Non-obviousness

The Examiner has rejected Claims 1-3, 5, 6, 10, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Watts et al. (*J. Pharmacol. Exp. Ther.*, 2001, 299:434-441) in view of Zammatteo et al. (*Clinical Chemistry*, 2002, vol. 48, no. 1, p. 25-34), Langmann et al. (*Clin. Chem.* 2003, 49:230-238), Yabuuchi et al. (*Biochem Biophys. Res. Commun.*, 2002, 299:41-417) and Prades et al. (*Cytogenetic Genome Res.*, 2002 98:160-168).

Claim 1 has been amended to include the limitations of Claim 7, not included in this rejection.

Furthermore, the presently claimed invention not only permits qualitative and quantitative determination of multi-drug resistance with respect to all human ABC transporter genes specifically in view of a determination of potential active drugs, such as chemotherapeutics, but also teaches the reduction of the number of probes attached on the microarray. This reduction results in a low density array bestowing an improved focusing on genes required for multidrug resistance and at the same time a detailed overview of the therapeutic follow up of the patient.

None of the documents cited refers to the possibility to further reduce the number of ABC transporters by designing capture probes common for subfamilies in that the number of probes may be lowered likewise, improving at the same time correlation and outcome of the analysis due to the reduced number of genes to be tested (cf. section [0092] of the specification).

Moreover, Langmann et al. discloses a RT-PCR method for detection and quantification of 47 currently known members of the ABC-transporter superfamily. The advantage of the RT-PCR procedure disclosed in said reference resides in a reduction of the amount of starting material to 25-50 ng (cf. p. 237, left col., 1st par.). This issue clearly teaches away the skilled person from combining the teachings of said reference with e.g., Watts et al., since in this case the advantage envisaged by Langmann et al. will be abandoned.

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Therefore, currently amended Claims 1, 2, 5, 6, 10, 15 and 16 are non-obvious over the cited references.

The Examiner has rejected Claims 4, 10 and 14 under 35 U.S.C. §103(a) as being unpatentable over Watts et al. (*J. Pharmacol. Exp. Ther.*, 2001, 299:434-441) in view of Zammattéo et al. (*Clinical Chemistry*, 2002, 48:25-34), Langmann et al. (*Clinical Chemistry*, 2003, 49:230-238), Yabuuchi et al. (*Biochem Biophys. Res. Commun.*, 2002, 299:41-417) and Prades et al. (*Cytogenetic Genome Res.*, 2002 98:160-168) as applied to claims 1-3, 5-6, 10 and 15-16 above, and further in view of Nakayama et al. (*Int J. Cancer*, 2002, 101:488-495).

In view of the amendments and the arguments presented above, Applicant asserts that Claims 4, 10 and 14 are non-obvious over the cited references.

The Examiner has rejected Claims 4 and 7-9 under 35 U.S.C. §103(a) as being unpatentable over Watts et al. (*J. Pharmacol. Exp. Ther.*, 2001, 299:434-441) in view of Zammattéo et al. (*Clinical Chemistry*, 2002, vol. 48, no. 1, p. 25-34), Langmann et al. (*Clin. Chem*, 2003, 49:230-238), Yabuuchi et al. (*Biochem Biophys. Res. Commun.*, 2002, 299:41-417) and Prades et al. (*Cytogenetic Genome Res.*, 2002 98:160-168) as applied to claims 1-3, 5-6, 10 and 15-16 above, and further in view of List et al. (*Blood*, 1996, 87: 2464-2469).

In view of the amendments and the arguments presented above, Applicant asserts that Claims 4, 8 and 9 are non-obvious over the cited references.

The Examiner has rejected Claim 11 under 35 U.S.C. §103(a) as being unpatentable over Watts et al. (*J. Pharmacol. Exp. Ther.*, 2001, 299:434-441) in view of Zammattéo et al. (*Clinical Chemistry*, 2002, vol. 48, no. 1, p. 25-34), Langmann et al. (*Clin. Chem*, 2003, 49:230-238), Yabuuchi et al. (*Biochem Biophys. Res. Commun.*, 2002, 299:41-417) and Prades et al. (*Cytogenetic Genome Res.*, 2002 98:160-168) as applied to claims 1-3, 5-6, 10 and 15-16 above, and further in view of Dao et al. (*Human Molecular Genetics*, 1998, 7:597-608).

In view of the amendments and the arguments presented above, Applicant asserts that Claim 11 is non-obvious over the cited references.

The Examiner has rejected Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watts et al. (*J. Pharmacol. Exp. Ther.*, 2001, 299:434-441) in view of Zammattéo et al. (*Clinical Chemistry*, 2002, vol. 48, no. 1, p. 25-34), Langmann et al. (*Clin. Chem*, 2003, 49:230-238), Yabuuchi et al. (*Biochem Biophys. Res. Commun.*, 2002, 299:41-417)

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and Prades et al. (Cytogenetic Genome Res., 2002 98:160-168) as applied to claims 1-3, 5-6, 10 and 15-16 above, and further in view of van den Heuvel-Eibrink et al. (Int. J. Pharmacol. Ther.).

In view of the amendments and the arguments presented above, Applicant asserts that Claims 12 and 13 are non-obvious over the cited references.

The Examiner has rejected Claims 1-3, 5-6, 10 and 15-16 under 35 U.S.C. §103(a) as being unpatentable over Wang et al. (Chinese J. Cancer Res., 2002, 14:5-10) in view of Annereau et al. (Proc. Amer. Assoc. Cancer Res., July 2003, vol. 44, 2nd ed, abstract #3992, p. 796-797), Zammateo et al. (Clinical Chemistry, 2002, 48:25- 34), Langmann et al. (Clinical Chemistry, 2003,49:230-238), Yabuuchi et al. (Biochem. Biophys. Res. Commun., 2002, 299:410-417) and Prades et al. (Cytogenetic Genome Res., 2002, 98:160-168).

In view of the amendments and the arguments presented above, Applicant asserts that Claims 1, 2, 5, 6, 10, 15 and 16 are non-obvious over the cited references.

The Examiner has rejected Claims 1-3, 6 and 15 under 35 U.S.C. §103(a) as being unpatentable over Lee et al. (J. Pharmaceut. Sci., 2003, 92:2152-2163) in view of Langmann et al. (Clinical Chemistry, 2003, 49:230-238), Zammateo et al (Clinical Chemistry, 2002, 48 :25-34), Yabuuchi et al. (Biochem Biophys. Res. Commun., 2002, 299:41-417) and Prades et al. (Cytogenetic Genome Res., 2002 98:160-168).

In view of the amendments and the arguments presented above, Applicant asserts that Claims 1, 2, 6 and 15 are non-obvious over the cited references.

For all of the above amendments and arguments the rejection of Claims 1, 2, 4-6, and 8-16 under 35 USC §103(a) should be withdrawn.

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CONCLUSION

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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